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Technical Assistance for Assessment of Türkiye's Potential on Transition to Circular Economy

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EU BATTERY AND WASTE BATTERY REGULATION 2023/1542(EU)

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Activity 3.2.4. Training on Integrated Waste Management in Circular Economy
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MİNİSTRY OF ENVİRONMENT, URBANİSATİON AND CLİMATE CHANGE

EU BATTERY AND WASTE BATTERY REGULATION 2023/1542(EU)

10/10/2024

LEGISLATIVE STUDIES RELATED TO BATTERIES AND WASTE BATTERIES

- The principles regarding the management of waste batteries and accumulators in our country have been determined by the **'Regulation on the Control of Waste Batteries and Accumulators'** prepared by the Ministry and published in the Official Gazette dated 31 August 2004 and numbered 25569 and entered into force on 01 January 2005.
- By the Regulation in question;
- It is stated that producers are obliged to ensure the quality control, import control and control of the amount of harmful substances contained in the battery and accumulator products by labelling and marking, to determine the principles regarding import, export and transit, to prevent the production, export, import and sale of batteries and accumulators containing harmful materials, to take measures to minimise the amount of harmful materials in the accumulators produced or imported and to apply deposits to these products.

LEGISLATIVE STUDIES RELATED TO BATTERIES AND WASTE BATTERIES

During this process;

- The Council of the EU adopted *Regulation (EU) No 2023/1542 of the European Parliament (EP) and of the Council on Batteries and Waste Batteries* on 10 July 2023 and published it in the Official Journal of the EU on 28 July 2023. The Regulation amends the Waste Directive 2008/98/EC and EU Regulation 2019/1020/EC on Market Surveillance and Conformity of Products and repeals the existing EU Directive 2006/66/EC on batteries and waste batteries.
- This Regulation aims to contribute to the effective functioning of the internal market while preventing and minimising the adverse effects of batteries on the environment and to protect the environment and human health by preventing and minimising the adverse effects arising from the production and management of batteries.

LEGISLATIVE STUDIES RELATED TO BATTERIES AND WASTE BATTERIES

- Within the scope of the 'Communiqué on the Announcement of the Arrangement Made in the Annex of the Decision on Determining the Institutions to Prepare Technical Legislation for Increasing the Exports of Turkish Products (Product Safety and Inspection 2015/25)' published in the Official Gazette dated 31 December 2014 and numbered 29222 and amending the list attached to the aforementioned Decision, the Ministry of Industry and Technology (STB) and the Ministry of Environment, Urbanisation and Climate Change (MoUCC) is the responsible/coordinating institution and the Ministry of Trade is the contributing institution.

- Within the scope of the harmonisation of our national legislation with the Regulation of the European Parliament (EP) and the Council on Batteries and Waste Batteries, a joint technical working group was established with the Ministry of Industry and Technology and the Ministry of Trade and the work started on 30.10.2023.

LEGISLATIVE STUDIES RELATED TO BATTERIES AND WASTE BATTERIES

On the other hand,

- A project study on the preparation of national legislation in line with EU Regulation No 2023/1542 and the establishment of a management system for electric vehicle batteries has been initiated.
- A meeting was held in the Ministry with the participation of relevant institutions and organisations in order to discuss the project work, and subsequently the technical specifications for the project were prepared.
- **By agreeing on the relevant specification, the 'Protocol on Cooperation to be carried out within the scope of the Proposal for Harmonisation with the EU's New Battery Legislation and Establishment of a Management System for Electric Vehicle Batteries' was signed** between our Ministry and the Turkish Association of Chambers and Commodity Exchanges **and** the Project Opening Meeting was held on 5.9.2024.

LEGISLATIVE STUDIES RELATED TO BATTERIES AND WASTE BATTERIES

The project aims to do the following;

- Preparation of draft national legislation within the framework of the proposed EU Regulation No 2023/1542 and possible amendments to be made within the scope of the Regulation during the project, taking the country conditions into account,
- Establishment of a conceptual management system by developing the national technical infrastructure by taking the technical and legal situation in the world and EU countries into consideration regarding the management of EV batteries as product and waste within the scope of extended producer responsibility in our country.

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OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Batteries are an important source of energy and a key element in sustainable development, green transport, clean energy and climate neutrality.

In the coming years, the demand for batteries is expected to grow rapidly, especially for electric road transport vehicles and light transport vehicles using batteries for traction, and the battery market is expected to become an increasingly strategic market at the global level.

Regarding the management of waste batteries;

- Updating the legislation,
- Prevention/minimisation of negative impacts of waste generation and management,
- Reducing resource utilisation/increasing resource efficiency,
- Taking measures to protect the environment and human health

are required.

These measures are important for a circular and climate-neutral economy and its long-term competitiveness and strategic autonomy, and can create economic opportunities by increasing synergies between the circular economy and energy, climate, transport, industrial and research policies.

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Studies that Form the Basis for the EU Battery and Waste Battery Regulation

- The Commission_Communication of 17 May 2018 'Europe on the Move - Sustainable Mobility for Europe: Safe, Connected and Clean' includes the Strategic Action Plan on Batteries. This action plan sets out measures to support efforts to establish a battery value chain in Europe, covering raw material extraction, sustainable sourcing and processing, sustainable battery materials, cell production and the reuse and recycling of batteries.

- In its conclusions of 4 October 2019 on 'More Circularity-Transition to a Sustainable Society', the Council called for, inter alia, coherent policies supporting the development of technologies that improve the sustainability and circularity of batteries to accompany the transition to electro-mobility. The Council also called for an urgent revision of Directive 2006/66/EC, which should include all relevant battery materials and take particularly specific requirements for lithium and cobalt and a mechanism to allow this Directive to be adapted to future changes in battery technologies.

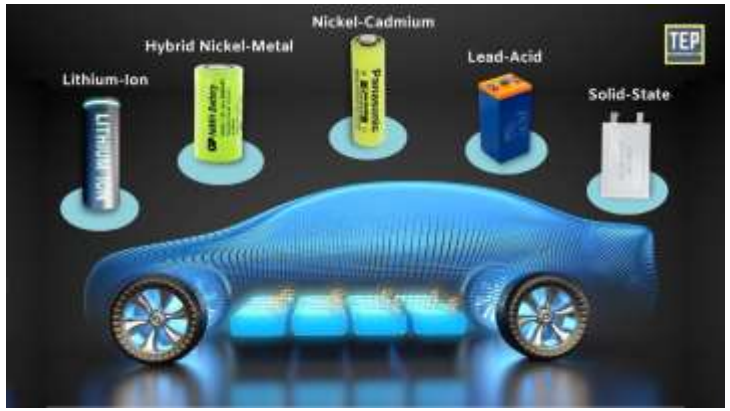
OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Studies that Form the Basis for the EU Battery and Waste Battery Regulation

- In the Commission Communication of 11 March 2020 entitled 'A New Circular Economy Action Plan for a Cleaner and More Competitive Europe', it is stated that the proposal for a new regulatory framework for batteries will address rules on recycled content and measures to improve collection and recycling rates of all batteries in order to ensure the recovery of valuable materials and provide guidance to consumers, and will address the possible phase-out of non-rechargeable batteries where alternatives are available. It is also stated that sustainability and transparency requirements will be taken into account by considering the carbon footprint of the production of batteries, ethical sourcing of raw materials and security of supply in order to facilitate the reuse, repurposing and recycling of batteries.

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Battery types covered by the Regulation



Portable batteries (weighing 5kg or less, not specifically designed for industrial use and not an electric vehicle battery, LMT battery or SLI battery)

Starter, lighting or ignition batteries (SLI)

Light transport vehicle batteries (LMT) (weighing 25 kg or less)

Electric vehicle batteries (EV)

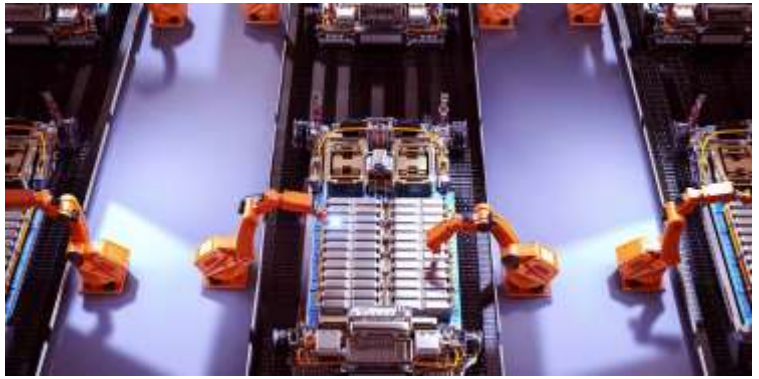
Industrial batteries and **stationary energy storage systems**

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

<u>Within the scope of the legislation that introduces obligations that will concern the entire life cycle of all types of batteries, including EV batteries, from design to waste;</u>

- Sustainability and safety rules for batteries to be placed on the EU market,
- Performance, durability criteria,
- Restriction on the use of hazardous materials,
- In accordance with the transition periods varying according to different battery types; notification obligation for the carbon content of batteries, labelling obligation for carbon content, carbon threshold for batteries that can be sold in the EU market,
- For electric vehicle batteries; carbon footprint declaration obligation, carbon footprint performance classification obligation, carbon upper limit compliance obligation,

have been brought.



OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

- As of 18 August 2026, labelling rules on the content and recycling rate of the battery,
- As of 18 February 2027, the obligation to carry a QR code (access to the digital battery passport for light transport, industrial, electric vehicle batteries with QR code)
- As of 18 August 2031, batteries must contain a certain amount of recycled content in cobalt (16%), lithium (6%), nickel (6%) and lead (85%),
- As of 18 August 2036, these quantities will be cobalt (26%), lithium (12%), nickel (15%) and lead (85%) (batteries must carry a recycled content certificate)
- **Under Extended Producer Responsibility for the manufacturer/importer distributor supplying batteries to the EU market;**

❖ Minimum collection target for portable batteries;

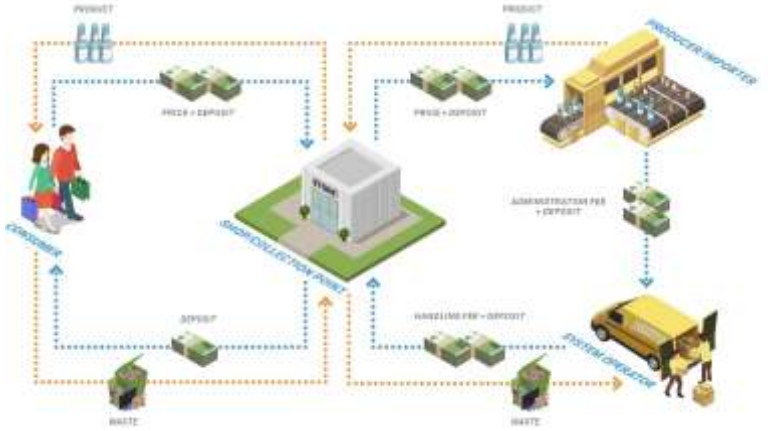
45% for 31 December 2023, 63% for 31 December 2027, 73% for 31 December 2030

❖ The collection target for light transport vehicles such as electric scooters and bicycles;

51% for 31 December 2028 and 61% for 31 December 2031

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

- Material recovery targets and recycling efficiency targets according to battery contents;
- Lithium material recovery target; 50% for 2027 and 80% for 2031, and recycling efficiency target for lithium-containing batteries; 65% for the end of 2025 and 70% for the end of 2030,
- Various design rules will be introduced to ensure circularity and effective waste management, and by 2027, it will be mandatory for the batteries in electronic devices to be removable and reinsertable by the end user.
- The European Commission is considering the introduction of a deposit system for batteries by the end of 2027



OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

- Third countries supplying products to the EU market will be obliged to certify through conformity assessment bodies (Certified Bodies) that the requirements of the duty of due diligence regarding the carbon footprint, recycled material content and social conditions of the products are fulfilled, and mandatory notification of raw material information will be introduced.
- If the batteries to be used in the vehicles to be supplied to the EU comply with the criteria to be introduced by the Regulation, and if the compliance is certified by the conformity assessment bodies, it will be possible for the CE certified products to enter the EU market.

EU Market Entry Conditions

❖ As a prerequisite for entry into the EU market, batteries must meet the sustainability and safety criteria (Articles 6-10, 12) as well as labelling and information criteria (Chapter III), duty of due diligence, extended producer responsibility and the Digital Passport.

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Sustainability and Safety Criteria & Labelling and Information Criteria

CE Certificate and EU Market Entry

Approval by conformity assessment bodies that the batteries supplied to the EU market meet the specified sustainability and safety criteria, labelling and information criteria and certification with CE certificate,

Hazardous chemicals

- Restriction of the use of hazardous materials such as mercury, cadmium and lead by Anne

Carbon Footprint

- Carbon footprint declaration is mandatory as of 18 February 2025 for electric vehicle batteries, 18 August 2028 for rechargeable industrial batteries without external storage units, and 18 August 2030 for rechargeable industrial batteries with external storage units,
- Carbon footprint declaration via QR code application shall accompany the battery,

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

<u>The aforementioned declaration shall include the following elements;</u>

- Administrative information about the manufacturer
- Information about the battery model
- Geographical location of the battery production facility
- The carbon footprint of the battery: the amount of carbon dioxide per 1 kWh provided by the battery during its service life (kg)
- The conformity assessment registration number of the battery
- A link to the website providing access to the study containing the findings on the carbon footprint

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Recycled Content

- Industrial batteries without external storage space (>2kWh), electric vehicle batteries, SLI batteries must carry the document containing the following information per battery model and production facility as of **18 August 2028**.

❖ Cobalt, lead, lithium and nickel content in the battery,

❖ How much of the mentioned ingredients are derived from production waste or consumption waste,

❖ The proportion of lead in the battery and how much is derived from waste,

- The date for light transport vehicle batteries is set as 18 August 2033.

Implementing legislation on the calculation methodology and verification of information to be issued on 18 August 2026,

- On 18 August 2031, the Article requires batteries to contain a certain amount of recycled content in cobalt (16%), lithium (6%), nickel (6%) and lead (85%), while on 18 August 2036 these amounts will be updated to cobalt (26%), lithium (12%), nickel (15%) and lead (85%). The batteries shall carry a certificate of recycled content,

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Performance and durability criteria

- As of 18 August 2028, portable batteries shall comply with the minimum thresholds set for electrochemical performance and durability criteria in Annex III, and the thresholds shall be determined by the implementing legislation to be issued by 18 August 2027,
- By 31 December 2030, the Commission's assessment to remove non-rechargeable batteries from the EU market,
- As of 18 August 2024, rechargeable industrial batteries, light transport vehicle and electric vehicle batteries must carry the certificate containing the **electrochemical performance and endurance values** specified in Annex IV,
- As of 18 August 2027, rechargeable industrial batteries and as of 18 August 2028, light transport vehicle batteries shall comply with the minimum thresholds set for electrochemical performance and durability criteria to be determined by the implementing legislation,

Battery Energy Storage System Safety

- As of 18 August 2024, battery energy storage systems entering the EU market must meet the relevant safety criteria set out in Annex V and bear the technical documentation set out in Annex VIII,

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Labeling, Marking and Information Requirements

- As of August 18, 2026;

❖ The obligation for batteries to be labelled with the general information specified in Annex VI,

❖ Requirement for rechargeable portable batteries, light transport vehicle and SLI batteries to carry a label indicating their capacity,

❖ Requirement for non-rechargeable portable batteries to be labelled "non-rechargeable",

❖ As of 18 February 2027, batteries must carry the QR code defined in Annex VI,

✓ Access to battery passport for light transport, industrial, electric vehicle batteries via QR code,

✓ For other batteries, access to general information, capacity, rechargeability, separate collection information, cadmium and lead content, declaration of conformity, etc.

Information on the Expected Life Expectancy of Batteries

As of 18 August 2024, parameters for determining the expected lifetime of battery energy storage systems, light transport vehicle and electric vehicle batteries to be included in the battery management system,

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Duty of Due Diligence

- As of 18 August 2025, companies with an annual turnover of over EUR 40 million and supplying primary batteries to the EU market are subject to the duty of due diligence,
- Exemption for companies placing batteries on the market that have been subject to circular activities such as reuse, recycling, etc,
- Compliance with the duty of due diligence is subject to third party verification and certified body verification,
- The Commission will prepare an implementation guide on the application of the duty of due diligence by 18 February 2025,
- Raw material and risk categories within the scope of duty of due diligence are in Annex X,
- Raw materials include lithium, cobalt, natural graphite and nickel,
- Risk categories are environmental protection, social rights, labour rights (ILO conven
  rights

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

- The conditions; for economic operators to make the duty of due diligence a company policy, to identify risks along the supply chain, to develop policies to prevent or compensate for possible risks, to provide third party audit reports on battery raw material, raw material supplier, raw material origin and quantity, suppliers in order to facilitate transparency and control in this context;
- for economic operators supplying batteries to the EU market and their suppliers to receive a conformity report as a result of the audits carried out by certified bodies;
- for the Commission to recognise the due diligence processes of other countries and entities will be determined by implementing legislation.

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Battery Waste Management / Extended Producer Responsibility (EPR)

- ***An authorised representative*** will be appointed by the Member States to perform tasks such as registration of producers, authorisation of producers and *producer responsibility organisations* (PROs), implementation of extended producer responsibility (ERP), data collection on the collection of batteries and waste batteries**.**

- ***A producer registration system*** will be established in order to monitor whether the producers who offer batteries to the EU market fulfil their responsibilities of the EPR.

- Producer responsibility; for producers, importers or distributors placing the product on the EU market for the first time, economic operators with EPR responsibility can delegate this responsibility to ***Producer Responsibility Organisations-PROs***.

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

EPR Fees:

Fees to be paid under producer responsibility;

- shall be calculated by taking the separate collection, transport and processing of the product at source (preparation for reuse, revenues from secondary raw materials obtained from recycling) into account,
- content of collected municipal waste should be analysed,
- consider battery waste prevention and waste management,
- It should include the costs of reporting and data collection by the competent authorities,

✓ In the case of reuse or recycling of batteries, it will be possible for the primary battery manufacturer and the battery manufacturer producing with recycled content to share the fee.

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

- Charges will be determined on an eco-modulation basis, taking criteria such as battery rechargeability, use of recycled content, reusability, carbon footprint into account. In this context, the more sustainable and circular the product it will be charged at a decreasing rate and an implementing regulation will be issued by the Commission.

- Information such as the amount of batteries collected and recycling rate will be published on the websites of producer responsibility organisations.

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

<u>Fulfilment of producer responsibility:</u>

- Verification by the competent authority of whether the economic operator with producer responsibility or the producer responsibility organisation that has taken over this responsibility has fulfilled its obligation and taking the necessary measures for the separate collection, transport, preparation for reuse, recycling of batteries to fulfil the obligation and providing the necessary information to stakeholders within the scope of waste battery management,

- Providing the necessary data for verification that the targets set out in Articles 59 and 60 for the separate collection, preparation for reuse and recycling of batteries are met,

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Minimum collection target:

- The minimum collection target for portable batteries is 45% for 31 December 2023, 63% for 31 December 2027 and 73% for 31 December 2030,

- The collection target for waste batteries in light transport vehicles such as electric scooters and bicycles is 51% for 31 December 2028 and 61% for 31 December 2031,

- Until 31 December 2027, the introduction of a deposit system for portable batteries will be evaluated,

- Provisions have been introduced for the separate collection of SLI, industrial and electric vehicle batteries, but no target has been set.

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Reporting: The economic operator assuming producer responsibility is required to report annually to the competent authority on the quantity and type of batteries placed on the market, the rate of collection, the rate of reuse and recycling after collection. Each Member State shall submit a similar report annually to the Commission.

Shipment of waste and used batteries: Criteria for the distinction between used batteries and waste batteries are set out in the annex to the legislation. Waste batteries will be allowed to be exported from the EU upon presentation of documentary evidence from the competent authority that they have been processed in the country of destination in environmentally sound and human health-friendly conditions, and the Commission is authorised to adopt implementing legislation to set out the basic criteria for these conditions..

OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Digital Battery Passport

- As of 18 February 2027, light transport vehicle, industrial and electric vehicle batteries with a capacity of more than 2 kWh supplied to the EU market are required to carry a battery passport.
- Although different for each battery model, this passport will contain the information contained in Annex XIII and end-users, certified bodies, market surveillance authorities and operators carrying out technical operations such as dismantling of waste batteries will have access to different sets of information according to their needs.
- In cases such as reuse and remanufacturing, a new battery passport will be created for the battery in connection with the original battery passport, and the battery passport of the recycled battery will be cancelled and a new battery passport will be created for the secondary battery

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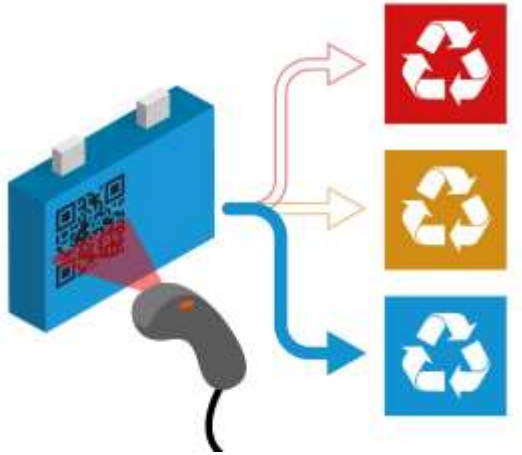
OVERVIEW OF THE NEW EU BATTERY AND WASTE BATTERY REGULATION

Information required in the battery passport according to Annex XIII:

For end users:

a. General information contained in Annex VI,
b. Battery contents: chemical properties, harmful ingredients, critical raw materials
c. Carbon footprint
d. Recycled content
e. Renewed content
f. Capacity (Ah)
g. Minimum, nominal and maximum voltage ratio
h. Power (Watts)
i. Off-use temperature range
j. Commercial warranty period
k. Energy efficiency
l. Battery cell and package resistance
m. Life cycle test rate- c-rate
n. Marking requirements
o. EU certificate of conformity
p. Necessary information about waste management and prevention



THANK YOU

Ministry of Environment, Urbanization and Climate Change
General Directorate of Environmental Management
Department of Circular Economy and Waste Management

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Thanks for your attention.

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